FIG. 1

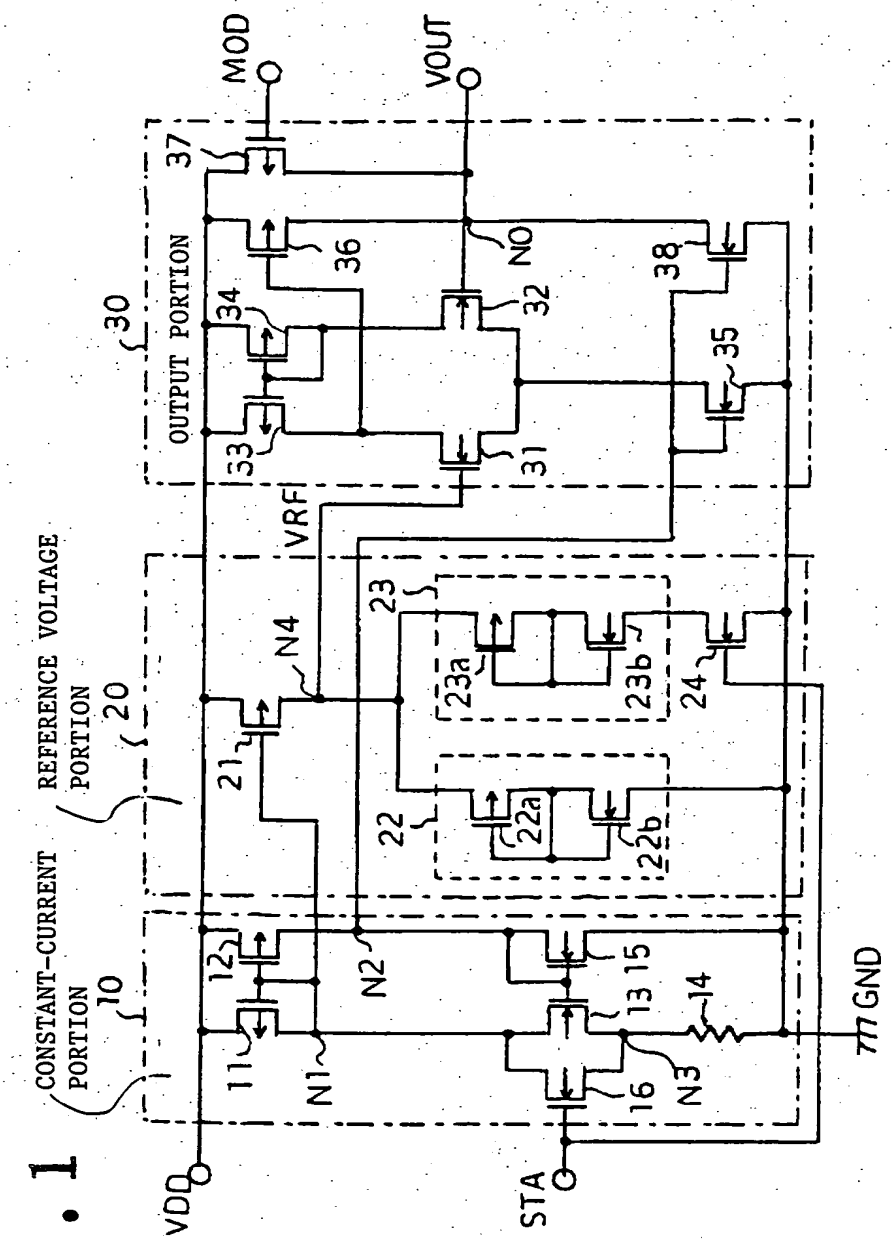
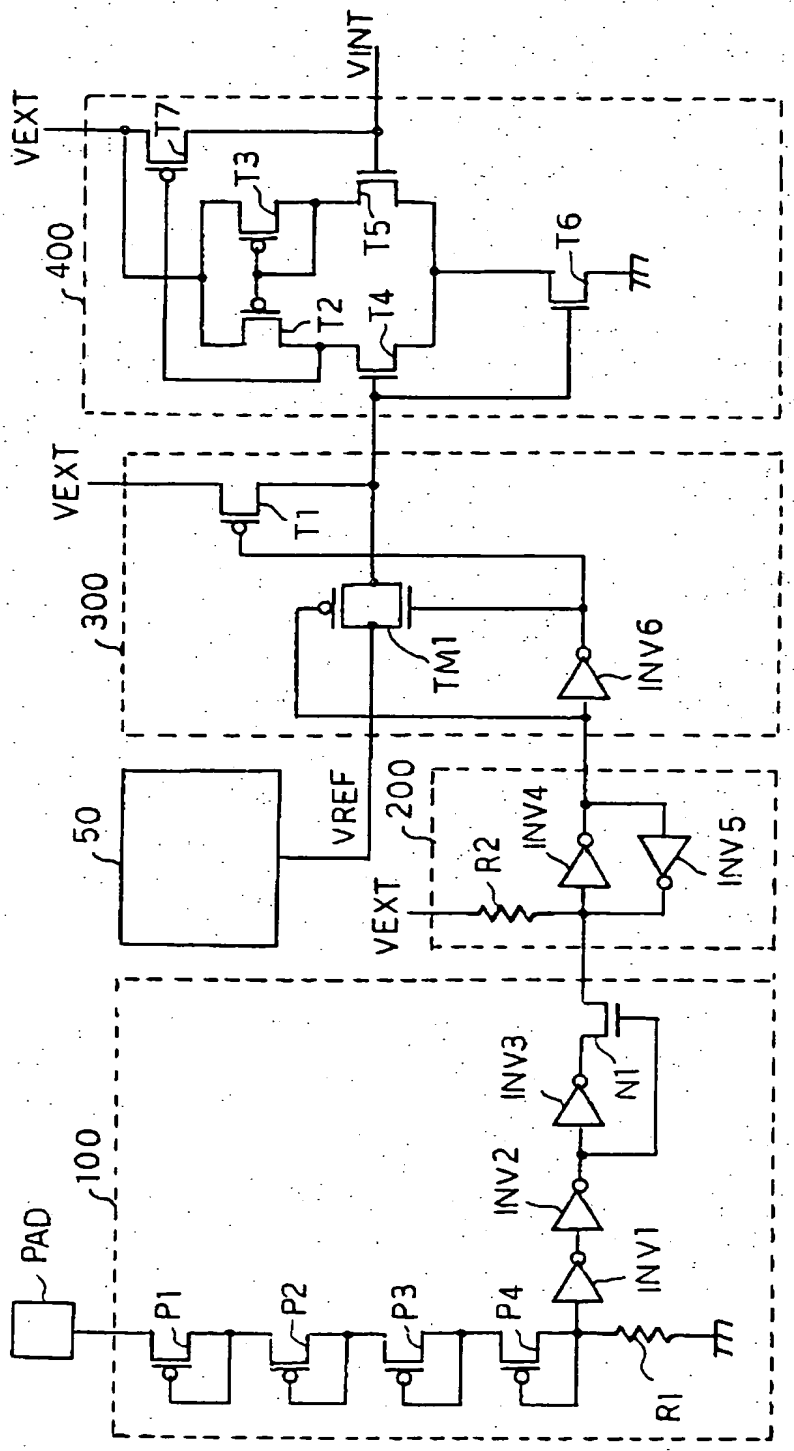
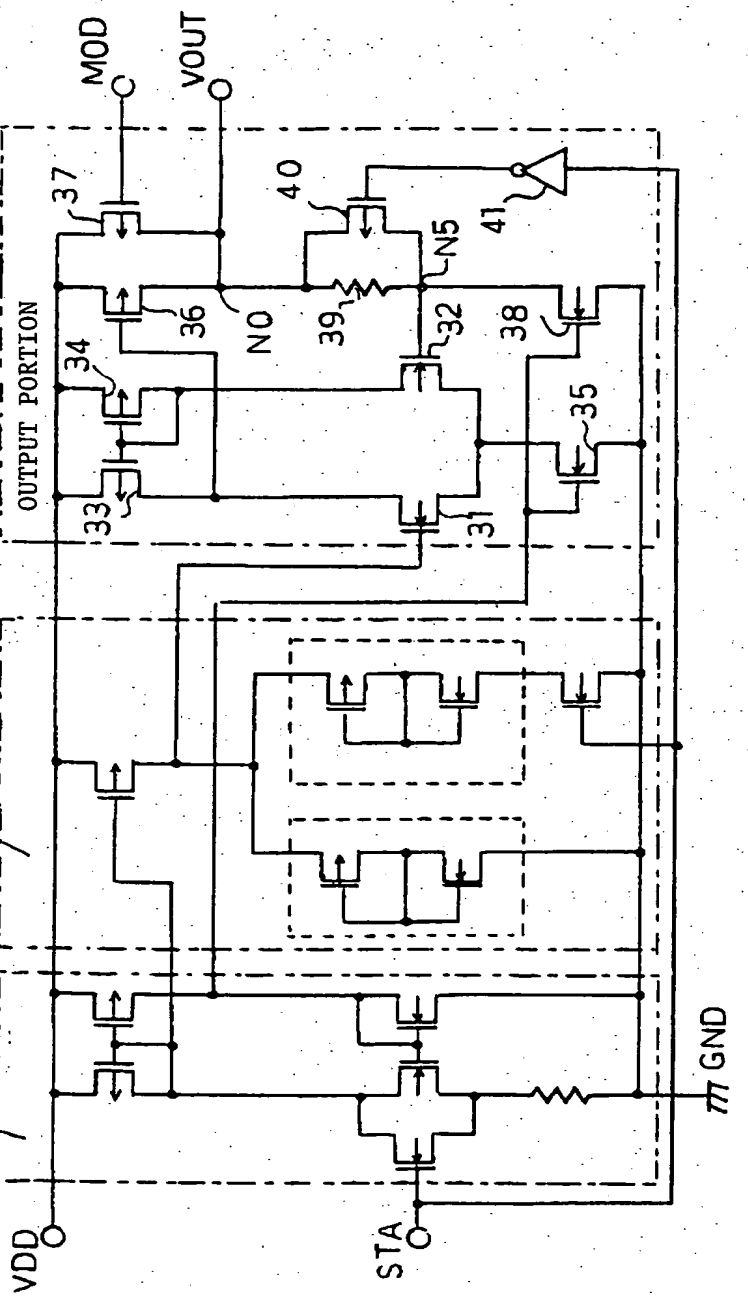

CONSTANT-CURRENT PORTION
10
REFERENCE VOLTAGE PORTION
20
OUTPUT PORTION
30
MOD
VOUT
VRF
VDD
STA
GND
N0
N1
N2
N3
N4
11
12
13
14
15
16
21
22
22a
22b
23
23a
23b
24
31
32
33
34
35
36
37
38

FIG.2



-PRIOR ART-

FIG. 3


MOD
VOUT
37
40
41
N5
36
NO
39
32
38
34
30A
OUTPUT PORTION
35
33
31
REFERENCE VOLTAGE PORTION
20
CONSTANT-CURRENT PORTION
10
GND
VDD
STA